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DISCOVERIES AND CURRENT EVENTS *

Argentine Republic: Plant Diseases Observed in the Country (1).

Apple Anthracnose. The fungus which causes the disease (*Sphaceloma pyri*) has up to now only been observed in pear trees. During the current year it has been seen for the first time on the leaves and fruit of apples grown in various parts of the province of Buenos Aires.

Bitter Pit of the Apple. This disease, of unknown origin, has been relatively common in the different fruit-growing districts of the country. The use of buds from infected plants seem to play an important part in the propagation of the disease.

Eucalyptus Canker. A disease which was seen for the first time on *Eucalyptus viminalis* coming from Mari Bauquen, Buenos Aires, and which produces 'cankers' in the twigs and branches of the tree. The injured parts were attacked by a fungus belonging to the genus *Melanconium*; the exact species has so far not been determined.

Citrus Melanose. This disease has appeared for the first time on lemons grown in the Islands of the Delta of the Paraná. The agent which produces the disease (*Phomopsis citri*) is comparatively common in sweet and bitter oranges in the coastal regions of the Republic.

Citrus Scab. This disease has been observed extensively during the present year on various citrus fruits (oranges, mandarins, and grapefruit) in the citrus-growing districts of the coast. The fungus (*Sphaceloma fawcettii*) which produces this disease is usually accompanied by certain mites (*Tenuipalpus* spp.) which appear to play an important part in the propagation of the disease.

Silver Scurf of Potatoes. Noted for the first time in potatoes coming from Dionisia, Buenos Aires. The fungus (*Spondylocladium atrovirens*) which causes the affection only produces superficial damage.

* Under this and the next heading the countries are arranged in French alphabetical order.

(1) Communication from the official correspondent of the Institute, Mr. Juan B. MARCHIONATTO, Agronomical Engineer, Chief of the Phytopathological Division, Ministry of Agriculture, Buenos Aires.

Argentine Republic: Eradication of Aleppo Grass by Sodium Chlorate (1).

On behalf of the Phytopathological Division of the Ministry of Agriculture and in collaboration with the Chemical Laboratory of this Ministry and with the Faculty of Agronomy and Veterinary Science of Buenos Aires, the Agronomical Engineer, Mr. José Vallega, has completed experiments on the eradication of Aleppo grass (*Sorghum halepense*) by means of sodium chlorate.

Sodium chlorate is one of the salts which are much used for controlling Aleppo grass and other weeds in the United States, Canada, New Zealand, Australia, etc., that is to say, in countries where agriculture is extensive, and where the weed problem becomes every day more important.

In the Argentine Republic the railway companies which usually employ sodium chlorate as a herbicide though generally mixed with other chlorates in order to reduce the cost, to induce a greater adherence and diminish the risks of fire on pastures so treated.

As the basis of experimentation with sodium chlorate the following points have been established:—

(1) Concentration at which sodium chlorate should be used.

(2) The time of year most suitable for application.

(3) Period of development at which Aleppo grass is most sensitive to the action of the salt.

(4) Influence of sodium chlorate on land treated which is subsequently to be cultivated.

Each of the points was subjected to the most minute investigation for which the most important publications on the subject were consulted.

As the result of experiments made by Mr. Vallega the following conclusions were drawn:—

(a) That the herbicide power of sodium chlorate lies in the chloranion which causes the death of plants by breaking the physiological equilibrium, inherent in the phenomena of oxidation, reduction and plasmolysis.

(b) The efficacy of the herbicide is directly proportionate to the quantity of the salt applied to each unit of area or to the strength of the solution when used in liquid form.

(c) The various factors acting against the efficacy of sodium chlorate are: rain which in washing the soil prevents the herbicide from penetrating and reaching the rhizomes of the plant; high temperatures; microorganisms of the soil; certain chemical elements of the soil which in decomposition of the salt destroy its herbicide power.

(d) In the tests made on Aleppo grass it has been proved that to arrive at its complete eradication it is necessary to apply the sodium chlorate at the ratio of 120 grammes per square metre.

(1) Communication from the official correspondent of the Institute, Mr. Juan B. Marchionatto, Agronomical Engineer, Chief of the Phytopathological Division, Ministry of Agriculture, Buenos Aires.

(e) The sensitiveness of Aleppo grass to the action of the herbicide increases with the age of the plant up to the maximum of its maturity.

(f) The application of sodium chlorate in dust form is more efficacious than in solution by reason of the fact that the salt slowly permeates the soil which increases the probability of it reaching the rhizomes of the plant.

(g) By previously cutting the plants, even if greater results are not obtained from the application of the chlorate at 12 %, the control operations are greatly facilitated and the use of mechanical apparatus for distributing the salt becomes possible.

(h) In the Argentine Republic the best time of year for applying sodium chlorate is at the end of the month of May when the plants are most sensitive and when atmospheric factors favour the subsequent action of the herbicide.

(i) Although land treated with sodium chlorate is at first sterile it can be cultivated the same year in which the salt is applied.

(j) The high cost price of sodium chlorate on the market is the chief obstacle to its extensive use by farmers and stock-breeders.

Cyrenaica: Plant Pests (1).

During the first fortnight of December, 1933 large quantities of caterpillars of *Ocnogyna mutabilis* attacked the cultivated fields in the plain of Barce. The control was continued for 6 weeks by 120 workers and the harvest was completely saved.

On the tomato, *Bryotropha plebejella* (Turati det.), without any doubt recently brought into the Colony, constantly increases in the gardens, principally at Fuehiat. Since 1932, the export of tomatoes has only been permitted in the winter, that is, from December to the middle of March. Up to the present it has not been possible to find an efficient means of control: neither spraying against the caterpillars, nor poisoned baits for the destruction of adults has given good results.

In the Jebel, olive growing is menaced by *Zonabris* (*Mylabris*) *oleae*, a beetle which attacks the flowers, leaves and even the fruit of olive trees.

Chlorita lybica has increased in dangerous proportions in the vineyards in the district of Benghazi and the plain of Barce. The invasion is due to carelessness on the part of farm managers who were convinced that the damage done was caused by scorching, due to drought. The foliage of vines attacked by *Chlorita* already by the second half of the month of July takes on a darker colour and the grapes do not ripen well, the leaves fall and the plants enter into a second period of vegetation by developing young shoots and very short internodes and the leaves curl up and pucker, resembling endive.

Poisoned baits for controlling the adults of *Noctuidae* (*Agrotis* and *Laphygma exigua*) have given good results. These baits also attracts *Earias insulana*, but not in sufficient quantities to counteract the efficiency of that means of control

(1) Communication from the official correspondent of the Institute, Mr. Giorgio KRUGER, Chief of the Phytosanitary Section of the Agricultural Service, Government of Cyrenaica, Benghazi.

of the spiny bollworm. Researches are at present being made for finding a more active means of control of this parasite.

Other experiments are being carried out with baits resistant to drought for controlling fruit fly (*Ceratitis capitata*) which have been reported for the first time at Fuehiat and in the plain of Barce.

On 3 August a centre of infestation of *Retithrips aegyptiacus* has been reported in the vineyards at Tocra.

Eritrea: The Tropical Migratory Locust (1).

During the month of August, 1934 a few swarms of the tropical migratory locust (*Locusta migratoria migratorioides*) have been reported in the district of Tessenei, coming from the Anglo-Egyptian Sudan. These swarms, after having flown over the western slopes settled in the Seraé (high plateau).

The reddish colour of these locusts shows that they have not yet attained sexual maturity.

Numerous storks followed the swarms.

Slight damage has been done to the cultivations near Arresa, Seraé.

United States of America: The More Important Entomological Records for August, 1934 (2).

Acrididae. Although grasshoppers continued troublesome during the greater part of August, control campaigns are practically closed in most of the Plains States.

Loxostege similalis Guen. The garden webworm appeared in large numbers about the middle of the month from Indiana westward to Missouri and Nebraska.

Crambus spp. Sod webworms were very troublesome during the latter half of the month from Ohio westward to Missouri and Nebraska, in many instances being particularly troublesome on golf greens.

Sphinx lineata Fab. The white-lined sphinx appeared in outbreak numbers in parts of Iowa, being very destructive to soybeans.

Blissus leucopterus Say. Reports received from Iowa indicate that the chinch bug will probably be an even more serious pest in that State in 1935 than it has been this year. It is estimated that over 11 million dollars worth of grain was saved in that State this year by the control campaign. Second-brood bugs were observed about the middle of the month in Missouri, Nebraska, and Kansas.

(1) Communication from Dr. Luigi MASSA, Acting Chief of the Agricultural Bureau of Eritrea, transmitted to the Institute by the Government of the Colony.

(2) Communication from Mr. Lee A. STRONG, Chief of the Bureau of Entomology and Plant Quarantine, United States Department of Agriculture, Washington, D. C.

Conotrachelus nenuphar Hbst. The plum curculio will probably go into hibernation in larger numbers than usual in the Fort Valley peach section of Georgia.

Erythroneura comes Say. The grape leafhopper is more abundant in the Niagara district of New York than it has been for several years.

Phlegethontius quinquemaculata Haw. The tobacco worm is causing serious damage to tomatoes in parts of Iowa, Nebraska, and Nevada.

Paratrioza cockerelli Sulc. Table-stock potatoes in the irrigated section of Wyoming have been reduced 65 percent by the tomato psyllid.

Epilachna corrupta Muls. The Mexican bean beetle has been more abundant and more widely distributed than ever before in Maine. Similar reports of infestations have been received from the New England and Middle Atlantic States, and it is reported to be moderately abundant throughout its range.

Cryptococcus fagi Baer. Twenty-one additional townships in Washington, Penobscot, Hancock, and Waldo Counties in Maine, have been found infested by the beech scale.

Mozambique: Locust Movements (*Nomadacris septemfasciata* and *Locusta migratoria*) (1).

Cabo Delgado District. During the month of July, 1934 swarms were reported in different parts of this district where they have caused some damage. The majority of the swarms followed a northerly direction, but towards the end of the month large swarms, coming from Tanganyika Territory, crossed the frontier, going towards the S. A high mortality was observed, due to an epidemic probably caused by *Empusa grylli*.

Tete District. The situation in this district is improving. Some small swarms were reported flying towards the N. and W.

Quelimane District. The swarms reported are not large. They usually fly towards the N. Some come from Nyasaland. An epidemic has been observed among the locusts.

Inhambane District. Movements of locusts continue to be small. Swarms generally fly towards the N., though some go towards the E. and W. and others S.

Lourenço Marques District. Swarms coming from Zululand have crossed the southern frontier and entered this district, joining up with other swarms going towards the N. Other swarms have been reported, for the most part flying N. Some of them went towards the S. or S. W. and S. E.

(1) Communication from M. Julio Gardé Alfaro Cardoso, Chief of the Entomological Section, Lourenço Marques, transmitted to the Institute by the Direction of Agricultural Services of the Colony.

On 1 July a small swarm flew over the whole town of Lourenço Marques. On 17 July a large swarm, following the same direction, settled for the most part on the E. of the town where they remained for two days.

An epidemic caused by a fungus (*Sporotrichum* ?) and a bacterial disease (*Coccobacillus* ?) have been responsible for the death of great quantities of locusts.

Conclusion. The general situation is better than in the month of June.

Nevertheless, compared to the same month in 1933, conditions are decidedly worse in the S. and extreme N. of the Colony where no locusts existed at that time.

In general the movements are towards the S. and N., though it is probable that, with the coming of hot weather, there will be a new invasion from the N. towards the S. or from the N. E. towards the S. E. of which the swarms reported at Cabo Delgado, coming from Tanganyika Territory, are the forerunners.

Southern Rhodesia : Locust Invasion, 1932-1934 (1).

Monthly Report No. 20. July, 1934.

The position during the month has shown little change. The only species of locust recorded has been the Red Locust (*Nomadacris septemfasciata*, Serv.).

Winged swarms of this species have been present in most parts of the Colony, but have not exhibited much movement nor attracted much attention. As was the case last year, the eastern border appears to be a favoured haunt of these swarms, probably due to the higher humidity. Swarms cross and recross to and from Portuguese East Africa.

Movement of swarms as recorded have taken place in all directions and there is no evidence of any definite trend. The higher ground and hilly country appear to be attractive at this time of year.

Enemies and Disease.

The month of June was unusually mild and humid, especially on the Eastern Border, and this seems to have been responsible for a recrudescence of *Empusa grylli*. Locusts were observed or reported to be dying from this disease in large numbers in that region up to the third week in July, whole swarms being stated to have settled and failed to move again. Away from the region of the Eastern Border the disease was not, however, noticed in July, all swarms examined being apparently healthy.

No other enemies or diseases were recorded during the month.

Outlook.

No change. The position is likely to reveal itself more clearly with the advent of warmer weather and increased activity on the part of the swarms.

(1) Communication from the official correspondent of the Institute, Mr. Rupert W. Jack, F. E. S., Chief Entomologist, Department of Agriculture, Salisbury, Southern Rhodesia.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — According to a Ministerial Communication dated 22 June, 1934, the inspection with regard to San José scale [*Aspidiotus perniciosus*] should be applied to all imported citrus fruits. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. September 1934, Bd. VI, Nr. 5, S. 87).

*** By Decree of 17 July, 1934 the customs house of Eisenstein, Bavaria, is added to the list of those which are authorised to accept consignments of fruits, living plants and parts of living plants, the importation of which is permitted only after inspection with regard to San José scale. (*Ibid.*, S. 86-87).

*** By Decree of 17 July, 1934 relative to the application of the regulations on the use of highly poisonous products it is forbidden to use in the control of plant diseases and pests arsenic compounds having a content of arsenic above 0.10 %.

It is forbidden to treat vines with arsenic sprays after 10 August and to treat them with arsenic dusts after 31 July.

All packages containing arsenic compounds should be marked with the exact content of arsenic, and should be accompanied by instructions for use and a copy of instructions established by the competent authorities on how to avoid all danger of poisoning. (*Ibid.*, S. 88).

*** On 1 August, 1934 a list was published of official experts charged with executing, at the customs houses, the control of imports of living plants, etc., with regard to potato wart disease [*Synchytrium endobioticum*], grape phylloxera [*Phylloxera vastatrix*], cherry fruit fly [*Rhagoletis cerasi*], San José scale [*Aspidiotus perniciosus*] and apple maggot [*Rhagoletis pomonella*]. (*Ibid.*, 1. August 1934, Bd. VI, Sondernummer, 27 S.).

*** According to paragraph 4 of the Ordinance of 14 August, 1934 new regulations are established relative to the quality of potatoes intended for consumption. The following figures indicate in percentages the maximum weight permitted of diseased, damaged or misshapen potatoes:—

Wet rot and damage caused by frost: ¼ % at the place of consignment; 3 % immediately after arrival at the place of destination.

Dry rot: 1 ½ %.

Potato blight (*Phytophthora* [*infestans*]): 1 ½ % at the place of consignment; 3 % immediately after arrival at the place of destination.

Damaged and worm eaten tubers: 4 %.

Misshapen tubers: 4 %.

Tubers with yellow or black spots: 4 %.

Scab [*Actinomyces*] (potatoes seriously attacked): 4 %.

Wart disease [*Synchytrium endobioticum*]: any trace of this infection justifies rejection of the consignment. (*Ibid.*, S. 89-91).

Germany (Bavaria). — By Notification of 30 July, 1934 veterinary officials attached to the customs houses are charged with the inspection of imports of plants, potatoes and fruits. For this purpose the said officials will receive special instruction by courses organised by the Plant Protection Station. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. September 1934, Bd. VI, Nr. 5, S. 91-92).

Germany (Bremen). — By Police Ordinance dated 4 May, 1934 the control of the weed *Galinsoga parviflora* (' Franzosenkraut ') is made compulsory. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. September 1934, Bd. VI, Nr. 5, S. 92).

Germany (Mecklenburg). — By Decree of 2 August, 1934 the control of the weed *Galinsoga parviflora* (' Franzosenkraut ' or ' Knopfkraut ') is made obligatory. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. September 1934, Bd. VI, Nr. 5, S. 93).

Germany (Prussia). — By Police Ordinance dated 25 April, 1934, in view of the control of bark-beetles (Scolytids), land owners are obliged, in the Rhine province to decorticate the trunks of felled conifers before 15 May if they have not previous to that date been removed outside the woods or if they are within 2 km distance from woodlands. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. September 1934, Bd. VI, Nr. 5, S. 95).

*** By Decree of 4 June, 1934 the public establishments of seed disinfection in Prussian Saxony are put under official control.

It is established that whoever would disinfect grain on behalf of another by means of chemical products, should first obtain permission from the prefect. Permission will be given after notification has been received from the Central Plant Protection Station that the applicant has the appropriate machinery and that his services are to be relied upon. In these undertakings it is forbidden to employ as disinfectants products and concentrations other than those indicated in the brochure No. 7 published by the German Plant Protection Service. Agents of the police in control have free access to the centres of disinfection, and they should be given all information which they judge necessary. They are also authorised to take samples of the seed disinfected. A list of establishments which will receive official permission will be published each year in the spring and autumn. (*Ibid.*, S. 96-98).

*** By Police Ordinance, dated 23 July, 1934, for preventing the spread of Colorado beetle [*Leptinotarsa decemlineata*] from the centre of infestation found at Grüner Wald, district of Stade, province of Hanover, it is prescribed that

all cultivations of potatoes situated within a radius of 5 km around the centre of infestation should be treated with lead arseniate. The work will be directed by the special Commissioner charged with the control of Colorado beetle. (*Ibid.*, S. 94).

*** By Police Ordinance, dated 9 August, 1934, it is prescribed that all cultivations of potatoes in the district of Stade should, during the month of August, be controlled with regard to the presence of Colorado beetle. Pupils, under the direction of their instructors, are put at the disposition of the Service charged with the control of this pest. (*Ibid.*, S. 95).

Spain. — According to the Decree of 21 August, 1934 organising the official Service of inspection, control and regulation of exports, the ' Orden ' of 1 September, 1934 determines the functions committed to this Service which, for the present, will be confined to agricultural products exported in the natural state. (*Gaceta de Madrid*, Madrid, 7 septiembre 1934, año CCLXXIII, tomo III, núm. 250, pág. 2120 y 2121).

United States of America (1). — By a provision (BPQ-362) approved on 19 April 1934 and effective on 1 May 1934, grapes from regions in foreign countries where the Mediterranean fruit fly [*Ceratitis capitata*] occurs, which have been excluded from the United States by Federal plant quarantine laws since 1923, may now come in, under permit and after sterilization, at New York and any other northern port that may later be approved.

This provision is based on the results of recent experiments which demonstrated that all stages of the Mediterranean fruit fly in grapes can be destroyed by exposing the fruit to a reduced temperature for a certain period. The approved sterilization involves cooling the grapes until the center of the fruit reaches a temperature of 30 to 31 degrees Fahrenheit and holding them at this temperature for 15 days. Storage tests on certain varieties of Vinifera grapes grown in the United States indicate that this sterilization does not injure the fruit if the prescribed temperature is carefully maintained.

As a condition of entry the foreign grapes must be packed in tight barrels, kegs, or other approved containers so constructed as to prevent the escape, pending sterilization, of any stage of this fruit fly, if present. Within 24 hours of the time the grapes have been unloaded the fruit must be moved from the dock to an approved sterilization plant. Here sterilization will be applied under the supervision of an inspector.

*** It now appears that occasional shipments of grapes may be offered for entry under the said provision during the late summer months.

(1) From documents communicated to the Institute by Mr. Lee A. Strong, Chief of the Bureau of Entomology and Plant Quarantine, United States Department of Agriculture, Washington, D. C.

In view of this situation, as an added safeguard the entry, subject to sterilization, of grapes from regions where the Mediterranean fruit fly is known to occur, will be limited by Supplement No. 1 to provision above mentioned, dated 26 July 1934, to the period 15 October to 15 March.

*** By Amendment No. 1 to the Rice Quarantine No. 55, approved on 27 July 1934 and effective on 1 August 1934, the regulation 6 is revised as follows:

Paddy Rice. All importations of seed or paddy rice from Mexico shall be subject, as a condition of entry, to such inspection or disinfection, or both, at the port of arrival, as shall be required by the inspector, and to the delivery to the collector of customs by the inspector of a written notice that the seed or paddy rice has been inspected and found to be apparently free from plant diseases and insect pests or that the required treatment has been given. Should any shipment of such seed or paddy rice, be found to be so infested with insect pests or infected with plant diseases that, in the judgment of the inspector, it cannot be cleaned by disinfection or other treatment, the entire shipment may be refused entry.

Rice Straw and Rice Hulls. As a condition of entry, rice straw and rice hulls shall be subject to inspection and to treatment at the port of arrival, under the supervision of the inspector, by methods and at plants approved by the Bureau of Entomology and Plant Quarantine, and, as a further condition of entry, in order to permit effective treatment, the contents of packages or bales shall not be compressed to a density of more than 30 pounds per cubic foot. Rice straw and rice hulls will be admitted only at ports where adequate facilities are available for such treatment. The required treatment must be given within 20 days after arrival, but if any shipment of rice straw or rice hulls shall be found upon arrival to be dangerously infested or infected the inspector may direct immediate treatment under adequate safeguards; and, if the treatment and safeguards are not put into effect as directed, the shipment shall be removed from the country immediately or destroyed.

Unless, within 20 days after the date of arrival of a shipment at the port at which the formal entry was filed, the importation has received the required treatment, due notice of which shall be given to the collector of customs by the inspector, demand will be made by the collector for redelivery of the shipment into customs custody under the terms of the entry bond, and, if such redelivery is not made, the shipment shall be removed from the country or destroyed.

France. — By Ministerial Decree of 22 September, 1934, relating to the importation of fresh fruit, the prohibition contained in art. 1 of the Decree of 8 March, 1932 [see this *Bulletin*, 1932, No. 4, p. 57], relating to the measures to be taken for preventing the introduction into France of the San José scale (*Aspidiotuz perniciosus*), is applicable to consignments from Portugal.

The entrance into and transit through France of fresh fruits coming from Portugal shall be effected, under the supervision of the Plant Protection Service

by the customs offices indicated by the Ministerial Decrees of 9 May, 1932 and 22 July, 1933 [see this *Bulletin*, 1932, No. 6, p. 100, and 1933, No. 9, p. 206]. (Ministère de l'Agriculture. Direction de l'Agriculture. *Bulletin de l'Office de Renseignements Agricoles*, Paris, 1er octobre 1934, année 1934, nos 18-19, p. 425).

Italy. — A Ministerial Decree of 15 July, 1934 establishes a new distribution of the circumscriptions of the 21 Royal Observatories for plant diseases existing in the country. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 8 settembre 1934, anno 75°, n. 211, pp. 4076-4078).

*** By Royal Decree No. 1505 of 17 August, 1934 approval is given to the trade and navigation treaty between the Kingdom of Italy and the Republic of Portugal, signed at Lisbon 4 August, 1934.

According to article 11 of this treaty the high contracting parties engage not to impede reciprocal trade between the two countries by prohibitions and restrictions on importation, exportation or transit. Nevertheless there may be exceptions to this rule in so far as they are applicable to all countries or to countries in identical conditions, among them are those regarding the protection of useful plants against diseases, injurious insects and parasites. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 25 settembre 1934, anno 75°, n. 225, pp. 4282-8288).

*** By Ministerial Decree of 30 August, 1934, the commune of Pratola Sezza in the province of Avellino has been declared to be infested with grape phylloxera. (*Bollettino Ufficiale del Ministero dell'Agricoltura e delle Foreste*, Roma, 21 settembre 1934, anno VI, n. 21, p. 4259).

*** By Ministerial Decrees of 5 September 1934 the communes of Anzola, in the province of Bologna, and of Civitanova del Sannio, in the province of Campobasso, are declared to be infested with grape phylloxera. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 12 settembre 1934, anno 75°, n. 214, p. 4120).

*** By Ministerial Decree ot 12 September, 1934, all vineyards in the communes of the province of Bologna have been declared infested with grape phylloxera [*Phylloxera vastatrix*]. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 19 settembre 1934, anno 75°, n. 220, p. 4216).

*** By Ministerial Decree of 14 September, 1934, the commune of Castorano in the province of Ascoli Piceno has been declared infested with grape phylloxera. (*Ibid.*).

*** By another Decree of the same date the commune of Monte San Biagio in the province of Rome has also been declared infested with grape phylloxera. (*Ibid.*).

*** The Decree Royal No. 1626 of 28 September, 1934 provides inter alia for the execution of the treaty of commerce and navigation between Italy and Bulgaria, signed at Rome 30 July, 1934.

In accordance with art. VII of this treaty the high contracting parties engage not to place any obstacle of any kind on the reciprocal trade of the two countries by prohibitions or restrictions of exportation and importation.

However, exceptions will be made to this rule, in so far as they are applicable to all countries under similar conditions, and among these exceptions those ensuring protection of plants against diseases and harmful insects and parasites. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 17 ottobre 1934, anno 75°, n. 224, pp. 4722-4737).

Morocco (French Zone). — By Vizirial Decree of 3 September, 1934 (23 joumada I 1353) the first article of the Vizirial Decree of 31 August, 1932 (28 rebia II 1951) [see this *Bulletin*, 1932, No. 11, p. 187] regulating the importation into Morocco of plants or parts of plants liable to carry European corn borer [*Pyrausta nubilalis*] is completed as follows: —

'Art. 1. — . . . . . .

(5) articles made from the above mentioned plants or with parts of these plants, chiefly brooms'. (Empire Chérifien. Protectorat de la République Française au Maroc. *Bulletin Officiel*, Rabat, 21 septembre 1934, XXIII[e] année, n° 1143, p. 976).

New Zealand. — By Notice Ag. 3131 of 12 July, 1933 the importation of fruits from countries infected with fruit fly (*Ceratitis capitata*) is forbidden. (*Deutsches Handels-Archiv*, Berlin, 15. Juli 1934, 2. Juliheft, S. 2730).

Aegean Islands. — In order to forestall any damage to vineyard property in the Aegean Islands which might result from an outbreak of grape phylloxera [*Phylloxera vastatrix*] in consequence of the increase in traffic relations with neighbouring countries which are already infested with this pest, the Government Decree No. 151, dated 26 September, 1934, provides, that as from the agricultural year 1934-1935, the plantation in these islands of any new vines on native ungrafted stocks is strictly prohibited. Vines grafted on American stocks must henceforth be employed.

The representatives of the public authority will be required to pull up, in the vineyards, any new rooted cuttings recognised as not American, after previous inspection carried out by the technical agricultural Services of the Government.

New plantations must be effected in accordance with the accepted technical principles; on shallow linear trenching, with American stocks, suited to the type of soil and its content in lime, and solely with rooted cuttings and not with ordinary cuttings.

In accordance with these injunctions, growers wishing to plant vines must each year, in respect of the following year, send a request on behalf of the whole

willage to the Department of Agriculture and Forests, indicating the area and the position of the land together with the district in wich it is situated. The Department will take a soil sample and will carry out the analysis for lime content and will instruct each grower as to the type of American stock that he should adopt, at the same time indicating the rules he should follow in planting.

The Government makes a contribution of 80 per cent. for the purchase of rooted cuttings, grafted or not, taken from the nursery officially approved, the price being fixed annually by agreement with the Government.

Whenever the presence of phylloxera is observed in any vineyard, and its appearance is confirmed by the Government Phytopathological Observatory, the grower will be required to pull up and destroy by burning the infected stocks; the number of stocks to be destroyed and the area of the affected land will be fixed by the Observatory.

The owner whose vines have suffered will receive in addition to the contribution referred to above 60 per cent. of the net cost of the prescribed trenching, which is compulsory and is inspected by the Department of Agriculture and Forests.

Provision is made for the payment of the two contributions for a period of three years. (*Il Messaggero di Rodi*, Rodi, 27 settembre 1934, anno XIX, n. 223, p. 3).

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ALTSON, R. A. Fruit-rot or bunch-rot of the oil palm. *The Malayan Agricultural Journal*, Kuala Lumpur, 1934, Vol. XXII, No. 8, pp. 360-366, figs. 1-6.

[Study of the organisms associated with the rot of *Elaeis guineensis*, and of its course within the bunch, has led to the conclusion that it is caused by a saprophytic invasion of tissues which have been predisposed to attack by a decline in resistance. The latter is held to be due to a nutritional disturbance].

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